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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,091

06/20/2006

Shoichi Hirano

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38834

7590

01/29/2008

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EXAMINER

SYKES, ALTREV C

ART UNIT

PAPER NUMBER

4145

MAIL DATE

DELIVERY MODE

01/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,091	Applicant(s) HIRANO ET AL.	
	Examiner ALTREV C. SYKES	Art Unit 4145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20070622, 20060424, 20060111</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The following documents, JP2000-17572, JP11-21765, and JP55-36309, cited in the information disclosure statement filed on 24Apr2006 have already been submitted and considered as part of the information disclosure statement filed on 11Jan2006.

Specification

2. The abstract of the disclosure is objected to because it is not a single paragraph.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-12, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shoichi et al. (JP2000-017572)

Regarding claim 1, Stoichi discloses:

- a method which comprises subjecting a fiber or a fiber product to hydrophilization treatment. (See [0016]-[0017])

Regarding the recitation that it is a method for providing a detergent-free washing function, the examiner notes that once a fiber is disclosed to be subjected to the hydrophilization (or hydrophilicization) treatment, it will, inherently, have a detergent-free washing function. See MPEP 2112. The hydrophilic property is noted by the examiner to provide a “soil release” characteristic to that of the cellulosic fibers which are treated by hydrophilization. Therefore, the fiber or fiber product can now be cleaned by only rinsing in water with no detergent (i.e. surfactant) necessary. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). Therefore, the method which comprises the above mentioned fiber or fiber product also inherently displays the detergent-free washing function.

Regarding claims 2-4 and 6-8, Stoichi et al. discloses a all of the claim limitations as set forth above.

Additionally the reference discloses the method wherein:

- the hydrophilization treatment is carried out by at least one method selected from a group consisting of a method for introducing a hydrophilic group, a method for introducing a hydrophilic molecule, a method for improving the surface physically, and a method for applying a coating agent containing a hydrophilic substance. (See [0023])

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- the fiber or fiber product contains at least a cellulose fiber, and the moisture absorption ratio of the cellulose fiber is adjusted to be 7.1% or higher by the hydrophilization treatment. (See [0010])
- a carboxyl group is introduced into the cellulose fiber by carboxymethylation. (See [0012] and [0024])
- the carboxymethylation degree is adjusted to be 0.1 to 10% by mole. (See [0024])
- graft polymerization to the cellulose fiber is carried out using at least one kind of monomer selected from a group consisting of methacrylamide, hydroxyethyl acrylate, acrylic acid, and methacrylic acid. (See [0038]-[0039] and [0047]-[0048])
- the grafting ratio is adjusted to be 1 to 20%. (See [0041] and [0047])

Regarding claims 9, Stoichi et al. discloses a cellulose-based fiber or cellulose-based fiber product:

- which contains a fiber subjected to hydrophilization treatment. (See abstract and [0010])

Regarding the recitation that it is a fiber capable of washing without using a detergent, the examiner notes that once a fiber is disclosed to be subjected to the hydrophilization (or hydrophilicization) treatment, it will, inherently, have a detergent-free washing function.

See MPEP 2112. The hydrophilic property is noted by the examiner to provide a “soil release” characteristic to that of the cellulosic fibers which are treated by hydrophilization. Therefore, the fiber or fiber product can now be cleaned by only rinsing in water with no detergent (i.e. surfactant) necessary. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). Therefore, the fiber or fiber product, as set forth above also inherently displays the detergent-free washing function.

Regarding claims 10-12 and 14-16, Stoichi et al. discloses all the claim limitations as set forth above. Additionally the reference discloses the cellulose-based fiber and/or cellulose-based fiber product wherein:

- the hydrophilization treatment is carried out by at least one method selected from a group consisting of a method for introducing a hydrophilic group, a method for introducing a hydrophilic molecule, a method for improving the surface physically, and a method for applying a coating agent containing a hydrophilic substance. (See abstract, [0016], and [0023])
- the fiber subjected to the hydrophilization treatment is a cellulose fiber having a moisture absorption ratio of 7.1% or higher subjected to the hydrophilization treatment. (See abstract, [0010], and [0016])
- the cellulose fiber subjected to the hydrophilization treatment is a carboxymethylated cellulose fiber. (See abstract, [0011]-[0012])

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- the carboxymethylated cellulose fiber has a carboxymethylation degree of 0.1 to 10% by mole. (See abstract, [0012], and [0024])
- the cellulose fiber subjected to the hydrophilization treatment is a cellulose fiber grafted by at least one kind of monomer selected from a group consisting of methacrylamide, hydroxyethyl acrylate, acrylic acid, and methacrylic acid. (See abstract and [0038]-[0039])
- the grafted cellulose fiber has a grafting ratio of 1 to 20%. (See abstract and [0041])

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoichi et al. (JP2000-017572) as applied to claims 4 and 12 above.

Regarding claims 5 and 13, Stoichi et al. discloses all of the claim limitations as set forth above and additionally discloses the method and fiber or fiber product wherein:

- the cellulose fiber is brought into contact with a treatment solution containing an alkali metal hydroxide in a concentration of 20 to 100

g/L, monochloroacetic acid or a monochloroacetic acid alkali metal salt in a concentration of 100 to 400 g/L at 10 to 40°C. (See [0031]-[0034])

- the cellulose fiber subjected to the hydrophilization treatment is obtainable by bringing a cellulose fiber into contact with a treatment solution containing an alkali metal hydroxide in a concentration of 20 to 100 g/L, monochloroacetic acid or a monochloroacetic acid alkali metal salt in a concentration of 100 to 400 g/L at 10 to 40°C. (See abstract, [0013])

The reference does not explicitly disclose the specific time duration of 6 to 48 hours for contact with the treatment solution. Since the instant specification is silent to unexpected results, specific time duration of contact with solution is not considered to confer patentability to the claims. As the degree of solvency is a variable that can be modified, among others, by adjusting the time of contact with treatment solution, the precise time duration of said contact would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed time duration cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of time for the contact of cellulose fiber with treatment solution for the purpose of achieving desired degree of solvency. (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215

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(CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is 571-270-3162. The examiner can normally be reached on Monday-Thursday, 7:30AM-5PM EST, alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on 571-272-1453.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACS
1/17/08

/Basia Ridley/
Supervisory Patent Examiner, Art Unit 4145